Applicati No.: 09/446,677

## NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

	1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
	2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
X	3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
	4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
	5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
	6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
	7. Other:
U	
Аp	plicant Must Provide:
X	An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
	An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entrinto the specification.
X	A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).
Fo	r questions regarding compliance to these requirements, please contact:
	r Rules Interpretation, call (703) 308-4216 r CRF Submission Help, call (703) 308-4212
	tentIn Software Program Support (SIRA)
	Technical Assistance703-287-0200 To Purchase Patentin Software703-306-2600
	10 1 01011000 1 0101111 001111010

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K. Shahran-Shah

RAW SEQUENCE LISTING

SEQUENCE LISTING

DATE: 07/02/2001

PATENT APPLICATION: US/09/446,677B

TIME: 14:51:17

Input Set : A:\BIRKELUND1.txt

Output Set: N:\CRF3\07022001\I446677B.raw

## ENTERED

```
3 (1) GENERAL INFORMATION:
             (i) APPLICANT: BIRKELUND, Svend
                             CHRISTIANSEN, Gunna
      7
                             HEBSGAARD PEDERSEN, Anna-Sofie
      8
                             MYGIND, Per
      9
                             KNUDSEN, Katrine
     11
            (ii) TITLE OF INVENTION: SURFACE EXPOSED PROTEINS FROM CHLAMYDIA
     12
                                      PNEUMONIAE
           (iii) NUMBER OF SEQUENCES: 30
     14
            (iv) CORRESPONDENCE ADDRESS:
                   (A) ADDRESSEE: BROWDY AND NEIMARK, P.L.L.C.
     17
                   (B) STREET: 624 Ninth Street, N.W., Suite 300
     18
     19
                   (C) CITY: Washington
     20
                   (D) STATE: D.C.
                   (E) COUNTRY: USA
     21
                   (F) ZIP: 20001
     22
             (V) COMPUTER READABLE FORM:
     24
     25
                   (A) MEDIUM TYPE: Floppy disk
                   (B) COMPUTER: IBM PC compatible
     26
                   (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     27
                   (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
     28
     30
            (vi) CURRENT APPLICATION DATA:
C--> 31
                   (A) APPLICATION NUMBER: US/09/446,677B
C--> 32
                   (B) FILING DATE: 24-Mar-2000
C--> 38
           (vii) PRIOR APPLICATION DATA:
     35
                   (A) APPLICATION NUMBER: PCT/DK98/00266
                   (B) FILING DATE: 19-JUN-1998
     36
                   (A) APPLICATION NUMBER: DK 0744/97
     39
     40
                   (B) FILING DATE: 23-JUN-1997
     42
          (viii) ATTORNEY/AGENT INFORMATION:
                  (A) NAME: COOPER, Iver P.
     43
     44
                  (B) REGISTRATION NUMBER: 28,005
                  (C) REFERENCE/DOCKET NUMBER: BIRKELUND=1
     45
     47
            (ix) TELECOMMUNICATION INFORMATION:
                  (A) TELEPHONE: 202-628-5197
     48
     49
                  (B) TELEFAX: 202-737-3528
     51 (2) INFORMATION FOR SEQ ID NO: 1:
             (i) SEQUENCE CHARACTERISTICS:
     53
     54
                  (A) LENGTH: 3200 base pairs
     55
                  (B) TYPE: nucleic acid
     56
                  (C) STRANDEDNESS: single
     57
                  (D) TOPOLOGY: linear
            (ii) MOLECULE TYPE: cDNA
     59
     61
            (ix) FEATURE:
     62
                  (A) NAME/KEY: Coding Sequence
```

63

(B) LOCATION: 205...2988

RAW SEQUENCE LISTING DATE: 07/02/2001 PATENT APPLICATION: US/09/446,677B TIME: 14:51:17

Input Set : A:\BIRKELUND1.txt

Output Set: N:\CRF3\07022001\I446677B.raw

64	• •																
66	66 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:																
68	CAAT	GTC	GAA (	GAGAG	CACT	A AC	CAGG	AAAA	TTC	CGAT	TTC	ATAA	ACCO	CAC I	TTA?	TTATT	A 60
69	AATI	CTT	ACT :	TGCGT	CATA	T AA	AATA	GAAA	ACT	CAGA	GAG	TCAA	GAT	AAA A	ATTO	CTTGAC	120
70	AGCI	GTT	TG :	CATC	TTTA	A CI	TGAT	TTAC	TTF	TTTT	GTT	TCTA	TAT	GA I	GCG	ATAG	180
71	TCTC	TAA	AAA	ACAAA	AGCA	т та	CC A	TG A	AG A	ACT I	CG A	ATT C	CT 1	rgg g	TT :	TTA	231
72							M	et I	ys 1	hr S	Ser I	le F	ro 1	rp V	al 1	Leu	
73								1				5					
75	GTT	TCC	TCC	GTG	TTA	GCT	TTC	TCA	TGT	CAC	CTA	CAG	TCA	CTA	GCT	AAC	279
76	Val	Ser	Ser	Val	Leu	Ala	Phe	Ser	Cys	His	Leu	Gln	Ser	Leu	Ala	Asn	
77	10					15					20					25	
79	GAG	GAA	CTT	TTA	TCA	CCT	GAT	GAT	AGC	TTT	AAT	GGA	AAT	ATC	GAT	TCA	327
80	Glu	Glu	Leu	Leu	Ser	Pro	Asp	Asp	Ser	Phe	Asn	Gly	Asn	Ile	Asp	Ser	
81					30					35					40		
				ACT													375
84	Gly	Thr	Phe	Thr	Pro	Lys	Thr	Ser	Ala	Thr	Thr	Tyr	Ser	Leu	Thr	Gly	
85				45					50					55			
				TTT													423
	Asp	Val	Phe	Phe	Tyr	Glu	Pro	Gly	Lys	Gly	Thr	Pro		Ser	Asp	Ser	
89			60					65					70				
				CAA													471
92	Cys	Phe	Lys	Gln	Thr	Thr	Asp	Asn	Leu	Thr	Phe	Leu	Gly	Asn	Gly	His	
93		75					80					85					
				TTT													519
		Leu	Thr	Phe	Gly		Ile	Asp	Ala	Gly		His	Ala	Gly	Ala		
97	90	_				95					100					105	
				ACA													567
		Sei	Thi	r Thr			Lys	Asn	Leu			Ser	. GIŽ	Phe		Leu	
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																Ala	0.5.5
127	_			205			1	-1-	210	_				215			
		ACC	TCA			GCT	ATC	GAT			GGC	ACG	TCG			TCG	903
																Ser	- · <del>-</del>
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/446,677B

DATE: 07/02/2001 TIME: 14:51:17

Input Set : A:\BIRKELUND1.txt
Output Set: N:\CRF3\07022001\I446677B.raw

131			220					225					230				
	AAC	AAC		ттт	СТА	тат	TTT		GGG	AAT	GCA	GCG		ACT	ACT	GGC	951
															Thr		
135		235	-1-			-1-	240		1			245	-1-			1	
	GGT		ATC	TGC	AAC	ACC		GCG	AGT	GGA	TCT		GAA	CTG	ATA	ATC	999
															Ile		
	250			-1-		255	-1-			1	260					265	
		AAC	ААТ	AAG	ACT		ATC	TTT	GCT	TCA		GTA	GCA	GAA	ACA	AGC	1047
															Thr		
143				_	270					275					280		
145	GGT	GGC	GCC	ATC	CAT	GCT	AAA	AAG	CTA	GCC	CTT	TCC	TCT	GGA	GGC	TTT	1095
															Gly		
147	-	•		285			_		290					295	-		
149	ACA	GAG	TTT	CTA	CGA	AAT	AAT	GTC	TCA	TCA	GCA	ACT	CCT	AAG	GGG	GGT	1143
150	Thr	Glu	Phe	Leu	Arg	Asn	Asn	Val	Ser	Ser	Ala	Thr	Pro	Lys	Gly	Gly	
151			300		_			305					310	_	_	_	
153	GCT	ATC	AGC	ATC	GAT	GCC	TCA	GGA	GAG	CTC	AGT	CTT	TCT	GCA	GAG	ACA	1191
154	Ala	Ile	Ser	Ile	Asp	Ala	Ser	Gly	Glu	Leu	Ser	Leu	Ser	Ala	Glu	Thr	
155		315			_		320					325					
157	GGA	AAC	ATT	ACC	TTT	GTA	AGA	AAT	ACC	CTT	ACA	ACA	ACC	GGA	AGT	ACC	1239
158	Gly	Asn	Ile	Thr	Phe	Val	Arg	Asn	Thr	Leu	Thr	Thr	Thr	Gly	Ser	Thr	
159	330					335					340					345	
161	GAT	ACT	CCT	AAA	CGT	AAT	GCG	ATC	AAC	ATA	GGA	AGT	AAC	GGG	AAA	TTC	1287
162	Asp	Thr	${\tt Pro}$	Lys	Arg	Asn	Ala	Ile	Asn	Ile	Gly	Ser	Asn	Gly	Lys	Phe	
163					350					355					360		
165	ACG	GAA	TTA	CGG	GCT	GCT	AAA	AAT	CAT	ACA	ATT	TTC	TTC	TAT	GAT	CCC	1335
166	Thr	Glu	Leu	Arg	Ala	Ala	Lys	Asn	His	Thr	Ile	Phe	Phe	Tyr	Asp	Pro	
167				365	•				370		•			375			
169	ATC	ACT	TCA	GAA	GGA	ACC	TCA	TCA	GAC	GTA	TTG	AAG	ATA	AAT	AAC	GGC	1383
170	Ile	Thr	Ser	Glu	Gly	Thr	Ser		Asp	Val	Leu	Lys	Ile	Asn	Asn	Gly	
171			380			•		385					390				
															TCT		1431
	Ser		Gly	Ala	Leu	Asn		Tyr	Gln	Gly	Thr		Leu	Phe	Ser	Gly	
177		395					400					405					
															AAA		1479
		Thr	Leu	Thṛ	Ala		Glu	Leu	Lys	Val		Asp	Asn	Leu	Lys		
181						415					420					425	
															CTA		1527
	Ser	Phe	Thr	Gln		Val	Ser	Leu	Ser		GLY	Lys	Leu	Leu	Leu	GIn	
185					430					435					440		4.555
															GGT		1575
	Lys	GTA	val		Leu	GLu	ser	Thr		Pue	ser	GIn	GIU		Gly	ser	
189	ar-a	OT -	000	445	<b></b>	ma.	001		450	mm s	mc:	<b>3</b> C T	3.63	455	000	<b>3</b> G C	1.000
															GGG		1623
	ьeu	Leu	_	мет	Asp	ser	дТΆ		ınr	ьeu	ser	rnr		АТа	Gly	ser	
193	a mm	202	460	200	220	OID 3	003	465	7 7 TT	C mm	CAC	maa	470	CCT	Omm.	220	1671
															CTT		1671
	тте		тте	ınr	ASN	ьeu	_	тте	ASN	vaı	ASP	•	Leu	GTÄ	Leu	ьys	
197		475					480					485					

RAW SEQUENCE LISTING DATE: 07/02/2001 PATENT APPLICATION: US/09/446,677B TIME: 14:51:17

Input Set : A:\BIRKELUND1.txt

Output Set: N:\CRF3\07022001\1446677B.raw

199	CAG	CCC	GTC	AGC	CTA	ACA	GCA	AAA	GGT	GCT	TCA	AAT	AAA	GTG	ATC	GTA	1719
	Gln	Pro	Val	Ser	Leu		Ala	Lys	Gly	Ala		Asn	Lys	Val	Ile		
	490					495					500					505	
	TCT																1767
	Ser	Gly	Lys	Leu		Leu	Ile	Asp	Ile	Glu 515.		Asn	Ile	Tyr		Ser	
205	CAT	አ ጥር	መመረ	NCC.	510	CAC	CAC	СТС	መመረ			תיתים א	7 7 7	አመሮ	520	C TT TT	1815
	His																1013
209		Mec	riic	525	1113	кэр	GIII	шеи	530	SCI	пеа	пец	цуз	535	1111	Vai	
	GAT	GCT	GAT		GAT	ACT	AAC	GTT		АТС	AGC	AGC	СТТ		ССТ	GTT	1863
	Asp																1005
213	-		540					545					550				
215	CCT	GCT	GAG	GAT	CCT	AAT	TCA	GAA	TAC	GGA	TTC	CAA	GGA	CAA	TGG	AAT	1911
216	Pro	Ala	Glu	Asp	Pro	Asn	Ser	Glu	Tyr	Gly	Phe	Gln	Gly	Gln	Trp	Asn	
217		555	•				560					565					
219	GTT	AAT	TGG	ACT	ACG	GAT	ACA	GCT	ACA	AAT	ACA	AAA	GAG	GCC	ACG	GCA	1959
220	Val	Asn	${\tt Trp}$	Thr	Thr	Asp	Thr	Ala	Thr	Asn	Thr	Lys	Glu	Ala	Thr	Ala	
	570					575					580					585	
	ACT																2007
	Thr	$\mathtt{Trp}$	Thr	Lys		Gly	Phe	Val	Pro		Pro	Glu	Arg	Lys		Ala	
225					590					595		~			600		
	TTA																2055 <sub>:</sub>
	Leu	val	Cys		Tnr	Leu	ттр	GTA		Pne	Thr	Asp	тте	_	ser	Leu	
229	CAA	CAC	CTTT	605	CAC	አ መረግ	CCC	CCA	610	ССП	אשכ	CAA	CAC	615	CAA	CCT	2103
	Gln																2103
235	GIII	GIII	620	Vai	GIU	116	СТУ	625	1111	GIY	Mec	Giu	630	цуз	GIII	GIY	
	TTC	TGG		TCC	TCC	ATG	ACG		ттс	CTG	САТ	AAG		GGA	GAT	GAA	2151
	Phe																2101
239		635					640					645		1			
241	AAT	CGC	AAA	GGC	TTC	CGT	CAT	ACC	TCT	GGA	GGC	TAC	GTC	ATC	GGT	GGA	2199
242	Asn	Arg	Lys	Gly	Phe	Arg	His	Thr	Ser	Gly	Gly	Tyr	Val	Ile	Gly	Gly	
243	650					655					660					665	
245	AGT	GCT	CAC	ACT	CCT	AAA	GAC	GAC	CTA	TTT	ACC	TTT	GCG	TTC	TGC	CAT	2247
246	Ser	Ala	His	Thr	Pro	Lys	Asp	Asp	Leu	Phe	Thr	Phe	Ala	Phe	Cys	His	
247					670					675					680	•	
	CTC																2295
	Leu	Phe	Ala		Asp	Lys	Asp	Cys		Ile	Ala	His	Asn		Ser	Arg	
251	3.00	m > 0	0.0m	685			mma	mm.a	690	~~~		~~=		695		000	0040
	ACC																2343
254 255	Thr	Tyr		GLY	Thr	Leu	Pne		ьуs	HIS	ser	HIS		ьеu	GIN	Pro	
	CAA	7 7 C	700	mmc	አሮአ	תיתי א	CCN	705	CCA	7 7 C	mmm	m/cm	710	י שרים	COM	אחוא	2391
	Gln																2331
259	GIII	715	111	шец	пту	neu	720	Arg	niu	цуз	rnc	725	GIU	561	AIU	116	
	GAA		TTC	ССТ	AGG	GAA		CCC	СТА	GCC	TTG		GTC	CAA	GТT	TCG	2439
	Glu																
	730				. ,	735					740	~ E				745	
	TTC	AGC	CAT	TCA	GAC	AAC	CGT	ATG	GAA	ACG	CAC	TAT	ACC	TCA	TTG	CCA	2487

DATE: 07/02/2001 RAW SEQUENCE LISTING TIME: 14:51:17 PATENT APPLICATION: US/09/446,677B

Input Set : A:\BIRKELUND1.txt
Output Set: N:\CRF3\07022001\I446677B.raw

266	Phe	Ser	His	Ser	Asp	Asn	Ara	Met	Glu	Thr	His	Tvr	Thr	Ser	Leu	Pro	
267					750		9			755		-1-			760		
269	GAA	TCC	GAA	GGT	TCT	TGG	AGC	AAC	GAG	TGT	ATA	GCT	${\tt GGT}$	GGT	ATC	GGC	2535
270	Glu	Ser	Glu	Gly	Ser	Trp	Ser	Asn	Glu	Cys	Ile	Ala	Gly	Gly	Ile	Gly	
271				765					770					775			
		GAC															2583
	Leu	Asp		Pro	Phe	Val	Leu		Asn	Pro	His	Pro		Phe	Lys	Thr	
275			780					785					790	<b>a</b>			0.601
		ATT															2631
	Pne	Ile	Pro	GIn	мет	ьys		GIU	мет	vaı	Tyr		ser	GIN	ASI	ser	
279	mma	795 TTC	C 2 2	200	тот	» CIII	800	ccc	CCI	ССП	mmm	805	a mm	CCA	N.C.C	CTTC	2679
																	20/9
	810	Phe	GIU	Ser	ser	815	АБР	GTĀ	AIG	СТА	820	361	116	СТУ	AIY	825	
		AAC	CTC	TCC	አጥጥ		стс	ССТ	GCG	<b>3 3 3</b>		стс	CAG	ccc	Сат	-	27:27
		Asn															21.21
287	цец	MSII	ьец	Ser	830	FIO	Vai	СТУ	пта	835	rne	Val	GIII	GLY	840	116	•
	GGA	GAT	TCC	ТΔС		тат	GAT	CTC	тСА		TTC	ጥጥጥ	СТТ	TCC		GTC	2775
		Asp															2,,,
293	<b>Q</b> ±1	p	501	845		-1-	p	Lou	850					855			
	TAT	CGT.	AAC		CCC	CAA	TCT	ACA		ACT	CTT	GTG	ATG		CCA	GAC	2823
		Arg															
297	-	_	860					865					870			-	
299	TCT	TGG	AAA	ATT	CGC	GGT	GGC	AAT	CTT	TCA	AGA	CAG	GCA	TTT	TTA	CTG	2871
300	Ser	Trp	Lys	Ile	Arg	Gly	Gly	Asn	Leu	Ser	Arg	Gln	Ala	Phe	Leu	Leu	
301		875					880					885					
303	AGG	GGT	AGC	AAC	AAC	TAC	GTC	TAC	AAC	TCC	AAT	TGT	GAG	CTC	TTC	GGA	2919
304	Arg	Gly	Ser	Asn	Asn	Tyr	Val	Tyr	Asn	Ser	Asn	Cys	Glu	Leu	Phe	Gly	
	890					895					900					905	
		TAC															2967
	His	$\mathtt{Tyr}$	Ala	Met		Leu	Arg	Gly	Ser		Arg	Asn	$\mathtt{Tyr}$	Asn		Asp	
309					910					915					920		
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	Val	Gly	Thr	_	Leu	Arg	Phe										
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321	(2)			QUENC													
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333	Met	Lys	Thr	Ser	Ile	Pro	Trp	Val	Leu	Val	Ser	Ser	Val	Leu	Ala	Phe	
334	1				5					10					15		

VERIFICATION SUMMARY

DATE: 07/02/2001

PATENT APPLICATION: US/09/446,677B

TIME: 14:51:19

Input Set : A:\BIRKELUND1.txt

Output Set: N:\CRF3\07022001\1446677B.raw

L:31 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:32 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:38 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]

L:2475 M:220 C: Keyword misspelled or invalid format, [(ii) MOLECULE TYPE:]